

## REMARKS

By this amendment, applicants have amended claim 4 to replace the abbreviation "1N soda" with the equivalent definition, i.e., -- 1 mol/liter of soda concentration--.

Applicants request withdrawal of the finality of the office action for the reasons set forth in the Request for Withdrawal of Finality filed February 4, 2004. It is submitted the finality should be withdrawn, this amendment entered and a further office action provided.

Even assuming, arguendo, the finality to not be withdrawn, entry of the foregoing amendment to claim 4 is requested since the amendment merely complies with the requirement of form made in the outstanding office action. Moreover, the amendment places the application in condition for allowance for the reasons set forth hereinafter or, at least, in better form for consideration on appeal.

In view of the foregoing amendment to claim 4, reconsideration and withdrawal of the rejection of claim 4 under 35 USC 112, second paragraph, are requested.

Claims 1, 2, 5 - 8, 10, 11 and 21 - 23 stand rejected under 35 USC 103(a) as being unpatentable over United States Patent No. 4,271,218 to Heckel et al in view of United States Patent No. 6,184,261 to Biby et al. Applicants traverse this rejection and request reconsideration thereof.

The present invention relates to a method for thermally insulating an enclosure and to an installation containing a thermal insulant for an enclosure. Broadly, the present invention relates to insulation of a first enclosure placed in a second enclosure. The enclosures can consist of a string of tubings intended for transportation of a petroleum effluent, placed in another pipe, from a well for

example. Several thermal insulation techniques are currently known. The string can be insulated by using tubings comprising an insulating material deposited or fastened outside the tubings. This method is very expensive and the tubings are difficult to handle. The annulus can also be filled with a more or less insulating fluid, gelled gas oil, or rigid foam manufactured in situ. However, liquids are not very good insulants, gels are delicate to use in operation and not very temperature stable, while manufacture of rigid foams is difficult to control and sending them into the annulus blocks the tubing string in the well, thus preventing complete withdrawal of the string.

The method of the present invention comprising filling a volume defined by the space contained between a first enclosure interior to a second enclosure with vegetable foam particles. Thus, the installation comprises a first enclosure placed in a second enclosure and is characterized in that the space between the enclosures comprises a volume of vegetable foam particles used as a thermal insulant. Such is neither disclosed nor suggested by Heckel et al and/or Boehmer et al.

The Heckel et al patent discloses a pipe insulating jacket comprising a hollow cylinder made of a soft foamed material and an outer sleeve with abutting edges parallel to the axis of the pipe. The outer sleeve is formed by a metal foil carrying a heat-softenable coating on its inside, the inside of the metal foil being bonded throughout to the surface of the soft foamed material and, in proximity to the abutting edges, being welded to itself along its upwardly bent edges. As recognized by the Examiner, the Heckel et al patent fails to disclose that a space between first and second enclosures is filled with vegetable foam particles. In the first place, the soft foam material of Heckel et al is not made of a vegetable foam. Rather, the foam is disclosed to be advantageously a closed cell cross-linked polyethylene. Moreover, it

appears the foam is a layer of foam which is bonded to the outer sleeve; that is, the foam of Heckel et al is not in the form of particles.

The Examiner continues to allege that the Heckel et al patent discloses a space filled with foam particles. To the contrary, it appears the foam used for insulating the pipe in Heckel et al is a layer of foam and is not in the form of particles. In Heckel et al, aluminum foil is bonded to a closed-cell crosslinked polyethylene foam. The Heckel et al patent discloses that the insulating jacket is "rugged enough to withstand external mechanical stresses." See column 1, lines 25 - 29 of Heckel et al. Clearly the foam in Heckel et al is not used in the form of particles as in the present invention.

The patent to Biby et al discloses a foam that is the extrudate of a mixture of a biodegradable polymer, starch, talc, and a blowing agent. It is disclosed that the foam is water-resistant and in some variations waterproof making it an effective packing material. Thus, the foam of Biby et al is one which can be used as a loose-fill packing material to ship various industrial and household products. See, column 1, lines 19 - 20 of Biby et al. The Biby et al patent contains absolutely no disclosure of any thermal insulation characteristics of the foam. There is absolutely no suggestion in Biby et al that the foam should be used for anything other than loose-fill packing material. Certainly, there is no suggestion in Biby et al or in Heckel et al that the foam of Biby et al should be used for a pipe insulating jacket. In fact, it is submitted the teachings of Biby et al and Heckel et al are inapposite since it appears the foam of Heckel et al is used in sheet form. Accordingly, it is submitted there is no suggestion to combine the teachings of Heckel and Biby et al.

Claims 1, 3, 4 and 9 stand rejected under 35 USC 103(a) as being unpatentable over Heckel et al in view of United States Patent No. 5,272,181 to

Boehmer et al. Applicants traverse this rejection and request reconsideration thereof.

The Boehmer et al patent discloses biodegradable expanded foam material prepared by combining a starch-graft copolymer with grain based starch containing materials and 15 to 25% water and expanding the mixture either with or without blowing agents. The types of products which can be formed by the expanded foam material are described at column 3, lines 21 - 29 of Boehmer et al as follows:

The expected products of the invention include a wide array of foamed articles, including loose fill packing, foam sheeting, rigid foam blocks, and miscellaneous thermoformed products such as egg containers, food trays, plates, and food containers. In addition, the formulation is useful for making floor swiping compounds, and may be used for packaging hazardous waste materials which are to undergo a degradative treatment process.

All of the examples of Boehmer et al relate to the formation of loose-fill packaging materials, similar to those popularly known as "foam peanuts," and a foam sheet for use in packaging.

Clearly, the Boehmer et al patent is mainly directed to packing and packaging materials and provides absolutely no suggestion that the biodegradable expanded foam material can be used as an insulant for a pipe insulating jacket. Likewise, there is no suggestion in Heckel et al and that the material of Boehmer et al should be used in the pipe insulating jacket. Moreover, even assuming, arguendo, one of ordinary skill in the art would have combined the teachings of Heckel et al and Boehmer et al, the only reasonable combination would be to use a foam sheet, e.g., of the type described in Example 7 of Boehmer et al in place of the foam of Heckel et al which is also apparently in the form of a sheet. Thus, there is no suggestion in Heckel et al and/or Boehmer et al to use loose-fill material of Boehmer et al as the foam material in the pipe insulating jacket.

Clearly, neither Heckel et al nor Boehmer et al would have suggested filling the space contained between a first enclosure interior to a second enclosure with vegetable foam particles. Accordingly, the proposed combination of Heckel et al and Boehmer et al would not have suggested the presently claimed invention.

Claims 7 and 8 stand rejected under 35 USC 103(a) as being unpatentable over Heckel et al in view of Boehmer et al "and in further view of applicant's admitted prior art (specification page 2)." Applicants traverse this rejection and request reconsideration thereof.

The deficiencies of the proposed combination of Heckel et al and Boehmer et al are noted above.

While it may be common to have to pull a whole string of production tubings during production of a well, it is certainly not common to use vegetable foam materials as a thermal insulant in the space contained between enclosures in general or enclosures which consist of a string of tubings intended for transportation of a petroleum effluent. Accordingly, for at least the reasons above, claims 7 and 8 are patentable over the proposed combination of Heckel et al, Boehmer et al and "applicant's admitted prior art."

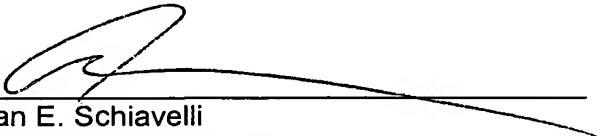
In view of the foregoing amendments and remarks, entry of this amendment and favorable reconsideration and allowance of all of the claims now in the application are requested.

To the extent necessary, applicants petition for an extension of time under 37 CFR 1.136. Please charge any shortage in the fees due in connection with the filing of this paper, including extension of time fees, to the deposit account of Antonelli,

Terry, Stout & Kraus, LLP, Deposit Account No. 01-2135 (Case: 612.41024X00),  
and please credit any excess fees to such deposit account.

Respectfully submitted,

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